

CLAIMS

1. A method of constructing a nucleus-implanted egg of a mammal, the nucleus-implanted egg having a haploid genome set derived from ng ovum and a haploid genome set from fg ovum, which comprises the steps of

(1) introducing a primitive ovarian follicle egg (ng ovum) into a nucleus-deleted egg in a germinal vesicle stage (GV stage egg) and then developing them to MII phase (second meiosis metaphase) by in vitro maturing and culturing to prepare a first nucleus-implanted egg, and

(2) extracting MII phase chromosome from said first nucleus-implanted egg and introducing it into other MII phase egg (fg ovum) to prepare a second nucleus-implanted egg,

wherein ovum from which an imprinted gene that undergoes gene modification posteriori during the generation of sperm is deleted is used as the ng ovum or fg ovum.

2. The method of claim 1, wherein the primitive ovarian follicle egg (ng ovum) is an oocyte of a neonate.

3. The method of claim 1, wherein the other MII phase egg is an ovulation ovum.

4. The method of claim 1, wherein the imprinted gene is at least one gene selected from the group consisting of H19, Gtl2 and Ras-grf1 genes.

5. The method of claim 1 or 4, wherein the ovum from which the imprinted gene is deleted is derived from a gene-deleted mammal.

6. A method of constructing a parthenogenetic embryo, which comprises activating the second nucleus-implanted gene obtained by the method recited in claim 1
5 and then culturing the second nucleus-implanted gene in vitro to develop the same.

7. A method of constructing a parthenogenetic mammal, which comprises implanting the parthenogenetic
10 embryo obtained by the method recited in claim 6 into the uterus of a mammal and growing the same.